



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

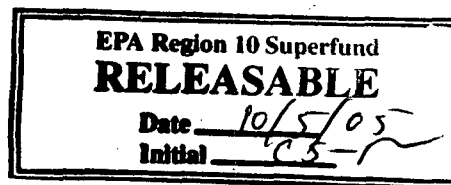
REGION 10

1200 Sixth Avenue
Seattle, WA 98101

8,1

November 7, 2003

~~CONFIDENTIAL~~



Tom Campbell
Campbell George & Strong, LLP
4265 San Felipe, Suite 700
Houston, Texas 77027

Re: Teck Cominco's October 22, 2003 Proposal for the Upper Columbia River Site

Dear Tom:

I am writing in response to Teck Cominco's proposed Agreement presented to EPA on October 22, 2003. As we discussed at that meeting, EPA and Teck Cominco will exchange comments on each other's documents so that both parties can come to a better understanding of what EPA is asking Teck Cominco to do in performing a Remedial Investigation and Feasibility Study ("RI/FS") at the site, and what Teck Cominco is offering to do at the site. Accordingly, EPA is providing some general comments on your proposed Agreement in this letter and technical comments in the attachments enclosed with this letter.

First, EPA can only enter into agreement under its explicit authorities. Sections 104 and 122 of CERCLA provide the President of the United States with the authority to enter into consent orders and consent decrees for response work at a site. This authority was delegated to the Administrator of EPA in 1987, and subsequently redelegated to the Regions. EPA does not have the authority to enter into agreements outside of the authorities provided by Congress, such as the proposed Agreement you have proffered.

Second, as we discussed in great detail with Teck Cominco at a meeting on September 15 and 16, 2003, an RI/FS under EPA oversight also requires additional data collection to determine where contamination has come to be located and at what levels; a fate and transport study to determine how the contamination moves through the system; a human health and ecological risk assessment to determine risk at the site; identification of various cleanup alternatives; and an evaluation of those alternatives. The technical work proposed in Teck Cominco's proposed Agreement (as described in the Exhibits) does not include all of these critical elements of an RI/FS. Rather, Teck Cominco is offering to perform a limited site characterization, based largely on available data, and a human health and ecological risk assessment.

We understand that Teck Cominco is willing to perform a study of the Upper Columbia River that includes stakeholder involvement, and that Teck Cominco is willing to commit significant resources toward such an effort. Based on this understanding, EPA has waited almost a year to move forward with studying the site, hoping that we can reach an agreement. We cannot move forward based on the Agreement proposed by Teck Cominco.



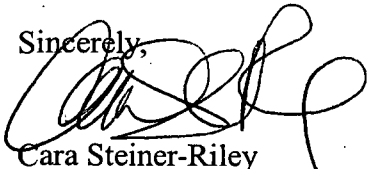
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EPA provided Teck Cominco with a draft AOC on October 10, 2003, which we are prepared to negotiate with you. We again ask that you enter into good faith negotiations to sign an administrative order on consent (AOC) for a complete RI/FS by December 16, 2003, under Sections 104, 122(a) and 122(d)(3) of CERCLA. We will work to understand your objectives and address them as appropriate in the RI/FS.

EPA is looking forward to meeting with you next week and to making progress at this site. However, for the meeting to be successful, it is critical that you understand that (1) Teck Cominco must agree to negotiate EPA's RI/FS AOC as EPA does not have the authority to enter a non-CERCLA agreement; and (2) Teck Cominco must be willing to perform a complete RI/FS at the site not just the limited work that it is currently proposing.

Please call me if you have any questions regarding this letter or the enclosure, otherwise I will see you at our offices Thursday, November 13, 2003, at 9:30am.

Sincerely,



Cara Steiner-Riley
Assistant Regional Counsel

cc: Cami Grandinetti, EPA Region 10
Tom Eaton, EPA Region 10
Bruce DiLuzio, Teck Cominco American Inc.

**EPA's Paragraph by Paragraph Response to
Teck Cominco's Proposed Agreement**

General Objection: Although EPA does not have the legal basis to enter into an agreement like the one Teck Cominco has proposed, we have agreed to comment on the proposed agreement and exhibits so that you can better understand what EPA would require of Teck Cominco in an RI/FS AOC.

AGREEMENT

WHEREAS this Agreement is a cooperative, enforceable agreement voluntarily entered into by and between Teck Cominco America Incorporated ("TCAI"), and the United States, through the U.S. Environmental Protection Agency ("EPA") (collectively "the Parties").

Comment: As stated in the letter, we cannot legally enter a contract of this sort. However, we view the RI/FS AOC as a "cooperative, enforceable agreement voluntarily entered into" by both parties.

WHEREAS the work under this Agreement will address concerns that historic metals contamination in Lake Roosevelt and the Upper Columbia River ("the Site") may present human health and ecological risks.

Comment: As already stated, the AOC would require Teck Cominco to perform more work than just a risk assessment. As detailed in our comments on the Exhibits, EPA would require Teck Cominco to perform a complete RI/FS.

WHEREAS this Agreement represents a good faith offer by TCAI to address the potential risk to human health and the environment at the Site.

Comment: As we discussed at the October 22, 2003 meeting, EPA does not consider this Agreement a "good faith offer" as is required by, and explained in, the Special Notice Letter EPA sent to Teck Cominco on October 10, 2003.

WHEREAS the Parties recognize that the factors producing ecological impacts (flood control, irrigation, hydroelectric generation, anadromous fish management, etc.) to the Site are varied and complex.

Comment: EPA is concerned with how much emphasis Teck Cominco is placing on this factor. Clearly, the ecosystem has been altered by the dam and drawdown, and EPA discussed this in our technical discussions with you in September. However, each ecosystem that is impacted by anthropogenic activities has some adjusted "normal state" which can be evaluated without

specific mention of each factor that is different. We want to ensure that Teck Cominco does not intend to place emphasis on every anthropogenic activity but the contamination.

WHEREAS under this Agreement TCAI commits to funding the assessment of human health and ecological risk related to historic metals contamination with the following specific commitments. Those related to schedules are considered as targets and their attainment is subject to other factors such as delays in completion of consultation and review activities involving other parties, and weather constraints.

Comment: EPA's RI/FS AOC and SOW require Teck Cominco to fund the complete RI/FS, set a schedule for work performance, specify a framework for modifying the schedule, and allow for delay based on "Force Majeure."

1. Fully fund the assessment of human health and ecological risk related to metals contamination;

Comment: Under the RI/FS AOC, Teck Cominco would need to fund the entire RI/FS, not just the Human Health and Ecological Risk Assessments.

2. Conduct additional site investigations as required to identify appropriate remediation, restoration or mitigation alternatives for identified risks at the Site;

Comment: Under the RI/FS AOC, EPA would work with all the parties to define what site characterization is required at the site for performing the work assessment, feasibility study, and remedy selection. This is captured in Section VIII of the AOC, and more specifically in the SOW. EPA is not requiring Teck Cominco to conduct site characterization for restoration alternatives under EPA's RI/FS AOC. However, you should discuss this matter with the tribes and natural resource trustees if you are interested in conducting that work at the same time.

3. Obtain the appropriate agreements from Teck Cominco Metals Limited to conduct remediation and/or mitigation for metals contamination attributable to its operations if risk assessment shown it is needed;

Comment: EPA's AOC requires Teck Cominco to conduct the RI/FS. After completion of the RI/FS, proposed plan, and remedy selection, EPA will enter into a consent decree with the appropriate party(s) for remedial design and remedial action (RD/RA). Once again, Teck Cominco should talk with the trustees and tribes if it is interested in performing mitigation at this time.

4. Involve the State of Washington, the Council of Governments, and the Tribes in the process of developing the assessments;

Comment: There are other parties involved with Lake Roosevelt that EPA and Teck Cominco will need to coordinate with beyond Washington, the tribes, and the

COG, including, but not limited to: other government stakeholders (Health, Parks Service, Bureau of Reclamation, BPA, natural resource trustees); environmental groups; and other community groups.

5. Fund reasonable oversight costs incurred by:

- a. EPA
- b. the State of Washington
- c. the COG
- d. the Spokane Tribe and the Confederated Tribes of the Colville Reservation

Comment: See Section XXII of the RI/FS AOC for payment of oversight costs. If you are interested, Teck Cominco may also enter separate funding agreements with any interested party.

6. Reimburse reasonable costs already incurred by EPA in connection with its investigation of the Site;

Comment: See Section XXI of the RI/FS AOC for payment of past costs. Under EPA's AOC, Teck Cominco is responsible for response costs incurred by EPA that are not inconsistent with the NCP, not just costs that Teck Cominco considers reasonable.

7. Retain the best-qualified technical staff available to carry out the work plans;

Comment. EPA's AOC also addresses this in Section VIII, Work to be Performed.

8. Enter into an agreement tolling the operation of any limitations period affecting claims at the Site by EPA or natural resource trustees;

Comment: EPA's AOC addresses this in Section XXV, Natural Resource Damage Assessment Provision. However, Teck Cominco Metals would also need to sign the agreement to address this issue or agree to enter the tolling agreement you refer to with the relevant tribes and trustees.

9. Begin work immediately on development of work plans for site characterization and the human health and ecological risk assessments;

Comment: The schedule for submittals is in Section VIII, Work to be Performed, and the SOW.

10. Subject work plans and implementation to EPA oversight and approval, in accordance with predetermined schedules; with regular reports to EPA by the technical staff;

Comment: This seems to summarize work covered in Sections VIII, XVIII, XIX of the AOC, and the SOW.

11. Complete development of work plan for human health risk assessment by September 2004.

Comment: The schedule for the risk assessments, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW.

12. Commence work on the human health risk assessment by November 2004.

Comment: The schedule for the risk assessments, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW.

13. Complete analysis of data for human health risk assessment and provide draft report to EPA by April 2006.

Comment: The schedule for the risk assessments, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW.

14. Final human health risk assessment report by December 2006.

Comment: The schedule for the risk assessments, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW.

15. Complete development of conceptual site models for ecological risk assessment by March 2004.

Comment: The schedule for the risk assessments, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW.

16. Complete development of work plan for ecological risk assessment by January 2005.

Comment: The schedule for the risk assessments, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW.

17. Commence work on the ecological risk assessment by February 2005.

Comment: The schedule for the risk assessments, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW.

18. Complete analysis of data for ecological risk assessment and provide draft report to EPA by July 2007.

Comment: The schedule for the risk assessments, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW.

19. Final ecological risk assessment report by December 2007.

Comment: The schedule for the risk assessments, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW.

WHEREAS TCAI understands from technical discussions already held by the Parties that the risk assessment processes to be carried out under this Agreement will cost in excess of \$3 million to complete.

Comment: EPA is requiring Teck Cominco to perform more than the risk assessments described in its proposed Agreement.

WHEREAS the Parties intend that all work carried out under this Agreement be performed in a manner consistent with the technical requirements of appropriate EPA technical guidance documents, and consistent with the National Contingency Plan.

WHEREAS under the terms of this Agreement, risk assessment work can begin immediately.

Comment: The schedule for the risk assessments, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW.

Accordingly, the undersigned parties agree to implementation of risk assessment activities at the Site pursuant to the following terms:

1. TCAI commits to funding fully the activities related to metals-contamination described in the work plans jointly developed in this process, including the reasonable costs of oversight of the work under this Agreement incurred by EPA, as well as those reasonable costs already incurred by EPA in its investigation of the Site. While the Parties recognize EPA has the major role in oversight of the work, and the ultimate authority for

resolution of disputes, under this Agreement, the Council of Governments ("COG"), the State of Washington ("State"), and the Spokane Tribe and Confederated Tribes of the Colville Reservation ("Tribes") will also participate in this process. To the extent that the State, the Tribes, and the COG incur reasonable reimbursable oversight costs regarding metals contamination in this process, TCAI agrees to pay such costs.

Comment: As already stated, Teck Cominco's responsibility under the AOC for funding EPA's past costs and oversight costs is in Sections XXI and XXII of the AOC. The State and the Tribes will participate in the technical discussions and development of the RI/FS. EPA is willing to further discuss, with the COG, the role of the COG in technical discussions.

2. The Parties acknowledge that this Agreement represents a legally-binding contract by and between them, and that it is intended to be and is fully enforceable as such by the Parties and each of them, should any Party not carry out its obligations under this Agreement.

Comment: EPA does not have the legal or statutory authority to enter this proposed Agreement.

3. Nothing in this Agreement is intended to affect the discretion of EPA to modify a work plan developed under this Agreement, if in the course of an assessment and after consultation with TCAI, EPA determines that such modification is required to address the issues identified in the characterization of the Site, or to otherwise limit EPA's ability to exercise its authority under CERCLA or other federal law to address conditions at the Site, including but not limited to, its right to issue an order addressing investigation and remediation of conditions that may present an imminent and substantial endangerment to human health and the environment. However, EPA shall not propose the Site for listing on the National Priorities List so long as TCAI is meeting its obligations under the terms of this Agreement.

Comment: EPA can modify the work plan at any time during the RI/FS process, as described in Section X of the RI/FS AOC. EPA does not limit its ability to exercise its authorities under CERCLA by entering the RI/FS AOC. However, as we have stated to Teck Cominco on numerous occasions, EPA will delay proposing the Site for listing on the NPL if Teck Cominco signs an RI/FS AOC consistent with the Superfund Alternative Sites Guidance that has already been provided to you.

4. EPA and TCAI have designated work teams and coordinators for the project in connection with the preliminary technical discussions leading to this Agreement. The Parties agree that in the development and implementation of the work plans under this Agreement, they will also provide for the involvement of the State, the Tribes, and the COG.

Comment: Section XV provides for designation of the Project Coordinators. EPA agrees that we should involve specific stakeholders in the development of the workplans like the State and the Tribes. We would also like to involve other federal entities including the natural resource trustees, Bureau of Reclamation, Parks Department, etc. We are open to discussing the role of the COG with the COG.

5. Within thirty (30) days of the effective date of this Agreement, the Parties, through their representatives, shall commence work on the risk assessment activities outlined in Exhibits A, B and C to this Agreement. The Parties agree that certain components of the overall work outlined in those Exhibits can be expedited, provided the activities are carried out within an acceptable risk assessment framework. The initial priority shall be development and implementation of a work plan addressing human health risk at the Site. The Parties will also begin work on development of a work plan for an ecological risk assessment, as described in Exhibit C, and will attempt to carry out any collection of data for each assessment in a manner that will minimize duplication of effort or costs.

Comment: As already stated, schedules are in the AOC and SOW, and will be developed further in the workplan to be submitted by Teck Cominco to EPA consistent with the AOC. EPA would like to work with Teck Cominco, and the other stakeholders, to develop ways to expedite certain components of the overall work.

6. The Parties recognize the development of a risk assessment framework acceptable to the broad range of public and governmental interests involved at Lake Roosevelt will require substantial effort in the initial stages of the assessment development process, making it difficult to predict the time required to carry out these activities. Notwithstanding this uncertainty, the Parties anticipate that, with the Parties' commitment to cooperate in this effort, the site characterization and risk assessments will require 36-48 months to complete, and anticipate that the timing of those activities will be consistent with the following interim milestone guidelines, absent delay resulting from oversight and review by EPA or other entities, or other unanticipated events:

- Initiate public, governmental and regulatory agency consultations on the risk assessment frameworks within thirty (30) days of the effective date of the Agreement.
- Complete consultations on the risk assessment frameworks within seven months of the effective date of the Agreement.
- Complete development of conceptual site models for human health risk assessment by January 2004.
- Complete development of work plan for human health risk assessment by September 2004.
- Commence work on the human health risk assessment by November 2004.

- Complete analysis of data for human health risk assessment and provide draft report to EPA by April 2006.
- Final human health risk assessment report by December 2006.
- Complete development of conceptual site models for ecological risk assessment by March 2004.
- Complete development of work plan for ecological risk assessment by January 2005.
- Commence work on the ecological risk assessment by February 2005.
- Complete analysis of data for ecological risk assessment and provide draft report to EPA by July 2007.
- Final ecological risk assessment report by December 2007.

Comment to Paragraph 6 and all bullets in Paragraph 6: The schedule for the risk assessments, along with other work requirements, will be developed in the workplan submitted by Teck Cominco to EPA, as defined in Section VIII of the AOC and the SOW. Once the workplan is accepted, it can be modified by EPA under Section X of the AOC, Modification of Workplan, Section XX Force Majeure, or amended by mutual agreement (Paragraph 98).

Upon completion of the human health and ecological risk assessments, the Parties will engage in further discussion including where to appropriate additional studies, what to address, where to appropriate the remediation and mitigation of risks identified at the Site and will obtain the appropriate agreements with Teck Cominco Metals Limited to conduct remediation and/or mitigation for metals contamination attributable to its operations where studies indicates remediation is necessary.

Comment: At this time EPA is only looking to Teck Cominco to conduct the complete RI/FS, not remedial work. We are confused as to why Teck Cominco appears willing to perform less than the complete RI/FS (i.e., only the risk assessment), but more work than we are actually requiring at this time (i.e., remediation).

7. In the event of any delay due to Force Majeure occurs or is anticipated, the affected Party shall promptly notify the other Party of such delay and the cause and estimated duration of such delay. The affected Party shall exercise due diligence to shorten, avoid, and mitigate the effects of the delay and shall keep the other Party advised as to the affected Party's efforts and its estimate of the continuance of the

delay. Neither Party shall be liable to the other for costs incurred by the other as a result of any delay or failure to perform as a result of Force Majeure. For purposes of this Agreement, "Force Majeure" means an event or condition that causes a delay in performance of this agreement by one Party or both of the Parties, and that is beyond either Party's reasonable control, and includes orders and/or actions of government agencies; fires, floods, earthquakes, or other occurrences of nature, including loss of public utilities, and may also include the inability, after good faith efforts, to access private land for work required under the Agreement.

Comment: The AOC defines "Force Majeure" in Section XX as "any event arising from causes entirely beyond the control of the Respondent ...that delays the timely performance of any obligation under this AOC notwithstanding Respondent's best efforts to avoid the delay." Best efforts includes making efforts to anticipate and address the effects of any potential Force Majeure event. The AOC sets out the framework for establishing whether an event was Force Majeure or not. Access issues are addressed under Section XIV of the AOC.

8. Exhibits A, B and C to this Agreement are intended to guide the site characterization and risk assessments carried out under this Agreement. Any decision by EPA to modify a work plan shall be subject to the Dispute Resolution process in paragraph 14.

Comment: The Exhibits are insufficient for describing site characterization and risk assessment. Under the AOC and SOW, there is a defined process for how Teck Cominco will develop both so that it is not inconsistent with the NCP and scientifically acceptable. Under Section X, EPA may modify the workplan, and Teck Cominco can either agree to perform the work or invoke dispute resolution under Section XVIII of the AOC.

9. During the term of this Agreement, EPA will receive monthly reports from the contractor retained for overall management of the risk assessments pursuant to this Agreement. Such reports shall summarize the activities in the prior month, including any unanticipated problems identified or arising in that period that may delay achievement of milestones identified in this Agreement and the steps recommended or implemented to deal with those problems. The monthly reports shall also include sampling results and data analyses received during that period. TCAI also agrees that copies of the monthly reports and of any final risk assessment reports will be maintained at its offices, and will be available upon written request to members of the public.

Comment: This is similar to Section XIII of the RI/FS AOC, Progress Reports and Meetings.

10. EPA agrees that it will coordinate efforts under this Agreement with the State and that it will implement those efforts relating to public involvement in the risk assessment process necessary to assure that the activities under this Agreement are consistent with the NCP.

Comment: EPA will agree under the RI/FS AOC to coordinate with the State, and involve the public in the RI/FS process, as is required by the NCP.

11. The costs incurred by TCAI under this Agreement will be a credit against any TCAI liability to the United States, the State, the Tribes or the COG for costs or damages related to the Site. This provision shall survive termination of this Agreement, whether by completion of the work or by earlier notice from one of the Parties.

Comment: EPA can discuss this issue with you further.

12. Whenever EPA, the State, the Tribes, or the COG wish to seek reimbursement from TCAI for oversight costs, they shall submit an invoice to TCAI, which shall set forth in detail the amount and the nature of the costs sought, and include, as applicable, contractor invoices, time records and any other documents supporting the claim. Should TCAI wish further documentation or wish to contest the claim or any part thereof, it may within thirty (30) days of receipt of the invoice, invoke the provisions of the Dispute Resolution process in paragraph 14 of this Agreement. If the claim is not disputed, TCAI shall pay the claim within thirty (30) days of receipt of the invoice.

Comment: EPA oversight costs are collected under Section XXII of the AOC. The process is similar to the one outlined in this paragraph, but the AOC helps define what costs are included in our oversight costs so that Teck Cominco and EPA have a similar understanding. The AOC also specifically defines what costs can be disputed and the process for disputing them. EPA can enter cooperative agreements with the Tribes and State and bill Teck Cominco as these costs are part of our response costs, or Teck Cominco can enter separate funding agreements with those entities.

13. Reimbursable oversight costs shall include reasonable costs not inconsistent with the NCP, including direct and indirect costs paid or incurred by the EPA or the other identified entities subsequent to the effective date hereof, in reviewing and developing plans, reports or other documents pursuant to this Agreement; verifying or otherwise overseeing the work hereunder, activities related to the development and implementation of a community relations plan, travel costs of EPA personnel and representatives of the other entities related to the work hereunder. All such costs for which reimbursement is sought by any entity shall be calculated in the same manner as provided for EPA costs under EPA guidance documents.

Comment: See Section XXII of the AOC for examples of response costs covered, including many that you identify here.

14. The Parties agree that, in resolving any disagreement under this Agreement, they will first attempt to resolve the matter through informal discussions between the Parties. Where the Parties are unable to resolve informally a disagreement on any matter arising under this Agreement, a Party may invoke the formal Dispute Resolution process by notifying the other Party in writing of its intention to do so, and describing the nature of the dispute, and the position of the Party invoking Dispute Resolution. Within fifteen (15) days after receipt of the notification, the other Party shall provide in writing to the Party invoking Dispute Resolution its position on the disputed matter, including any substantive proposal for resolution of the matter. Thereafter, the original disputing Party shall convene, within fifteen (15) days of receipt of the opposing positions, a meeting of the Parties to attempt to resolve the dispute informally. If the Parties are unable to reach agreement at that meeting, they shall attempt to resolve the disputed issue through mediation before a third party neutral jointly selected by the Parties. Selection of the mediator and establishment of the mediation date shall occur as soon as reasonably possible, and in any event within twenty (20) working days after the request of either Party. The Parties will each submit position statements to the neutral and to the other Party at least five (5) working days prior to the selected mediation date. The neutral shall review the submissions of the Parties on the disputed matter and meet with the Parties to attempt to reach resolution of the dispute. If the Parties are unable to reach resolution through mediation or otherwise, the matter will be reviewed by an EPA management official at the Division Director level or higher, who will issue a written decision on the disputed matter based on that official's review of the information exchanged by the Parties in the Dispute Resolution process including the mediation.

Comment: The process you outline is similar to the dispute resolution process outlined Section XVIII of the AOC except for your addition of a mediator/third party neutral. Also, under the AOC, Teck Cominco is not relieved of its obligations to perform and conduct activities under the AOC pending a decision by EPA's Division Director. Additionally, Teck Cominco would need to proceed in accordance with the Division Director's determination, and if it did not, Teck Cominco could be subject to various enforcement actions by EPA.

15. The Parties recognize that the factors producing ecological impacts to the Site are varied and complex, and that the interrelation between reservoir management activities (flood control, irrigation, hydroelectric generation, anadromous fish management) and sediment precludes a simple interpretation of data regarding metal fate and transport. The Parties agree that effective risk assessments, particularly aquatic, concerning Lake Roosevelt will require the extensive examination of non-contaminant stressors which may be important limiting factors in the ecological health of the lake. Further, it is recognized that factors concerning the operation of the lake as a reservoir must be fully considered in the interpretation of the apparent ecological risks of metals in sediments. Therefore studies of ecological impact proposed by this Agreement will seek to analyze those impacts in the context of these "whole lake" factors. TCAI is committing in this Agreement to address those issues that relate to metal content in sediments from mining and mineral processing. For the study of impacts not directly attributable to metal content of sediments, EPA and

TCAI will work together to fully involve agencies responsible for the hydraulic management of Lake Roosevelt.

Comment: EPA is looking to Teck Cominco to fund the complete RI/FS for the Upper Columbia River, not just a part of it. EPA, Teck Cominco and the other stakeholders can evaluate other ecological impacts on the Upper Columbia River in the RI/FS. EPA would like to involve all relevant stakeholders in the technical discussions, including the agencies responsible for the hydraulic management of Lake Roosevelt.

16. All Parties recognize that this Agreement has been negotiated at arms length and good faith, and acknowledge that entering into this Agreement and undertaking the activities provided for in this Agreement shall not be deemed an admission of liability by any Party hereto, or otherwise an admission against interest, and all Parties hereto acknowledge that nothing in this Agreement is intended to, nor does it, affect any Party's ability to assert or raise any claims or defenses, whether legal or equitable, in any action arising in connection with the Site.

Comment: EPA is willing to put language in the AOC that would address Teck Cominco's concerns regarding liability issues in future proceedings.

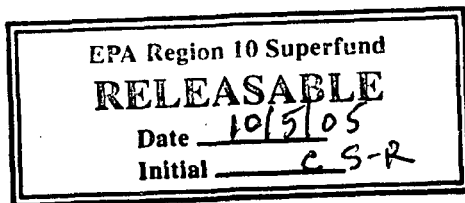
17. This Agreement is not intended to and shall not create any rights in any person who is not a party to this Agreement.

18. For purposes of this Agreement, "Effective Date" shall mean the latest date on which all the Parties execute this Agreement as set forth on the signature page.

Comment: The AOC becomes effective on the date it is signed by EPA.

19. This Agreement shall remain in effect until the activities described in the work plans jointly developed under this Agreement are completed, or until thirty (30) days after such earlier date as one of the Parties hereto gives written notice to the other Party of its intention to terminate the Agreement. Termination of the Agreement shall not relieve TCAI of its obligation to pay for work completed under this Agreement prior to the date of the notice of intent to terminate.

Comment: The AOC terminates when Teck Cominco demonstrates in writing and certifies that all activities required under the AOC have been performed and EPA has approved the certification.



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General Comment: EPA has agreed to comment on the proposed exhibits so that Teck Cominco can better understand what EPA would require of Teck Cominco in an RI/FS AOC. The AOC that was sent to Teck Cominco on October 10, 2003 includes the Statement of Work, which outlines all work associated with an RI/FS. The RI/FS includes more than just minimal site characterization and risk assessments, as is described in Teck Cominco's exhibits.

Exhibit A
Lake Roosevelt/Upper Columbia River
Executive Summary of Proposed Site Characterization Approach

Teck Cominco America, Inc. (TCAI), in consultation with EPA Region 10, the State of Washington (State), the Council of Governments (COG), and the Tribes, will conduct a site characterization of the Lake Roosevelt/Upper Columbia River Study Area (Site or Study Area) as defined by TCAI and EPA. The objectives of the site characterization will be to evaluate existing data relevant to characterization of the Site, including quantity and quality of those data; to identify data gaps; and to conduct sampling and analysis activities to address the identified data gaps. The site characterization process will utilize the best available scientific methodologies and procedures, and generally follow EPA guidance (1998, 2000); it will focus on collection and evaluation of data that, wherever possible, will support both human health and ecological risk assessments at the Site. The process and approach to site characterization will be described in a Site Characterization Work Plan to be developed by TCAI in consultation with EPA Region 10, and to be completed in summer 2004.

Comment: Teck Cominco does not provide enough detail, information or framework to understand what is being offered in this paragraph. See Section VIII of the RI/FS AOC for Site Characterization. Also see the RI/FS SOW for Task 3, Site Characterization. Under EPA's AOC and SOW, the site characterization task not only includes the identification of data gaps associated with human health and ecological risk but also focuses on understanding fate and transport of contamination through the system, how that contamination affects both human health and the environment, identification of cleanup alternatives and evaluation of alternatives including data collection for developing cleanup alternatives, etc. Fate and Transport should be a site characterization task. For all work performed by Teck Cominco under the AOC, EPA has oversight and final approval.

The State and the Tribes will participate in the technical discussions and development of the RI/FS, including associated tasks. EPA is willing to further discuss with the COG the role of the COG in technical discussions. There are other parties involved with the site that EPA and Teck Cominco will need to coordinate with beyond Washington, the tribes, and the COG including, but not limited to: other

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ATTORNEY WORK PRODUCT

government stakeholders (Health, Parks Service, Bureau of Reclamation, BPA, natural resource trustees); environmental groups; and other community groups.

The site characterization will be conducted using a phased approach, beginning with the review of existing data and production of a work plan that includes the results of discussions and agreements between TCAI and EPA, and consultation with the State, the COG and the Tribes, about the problem formulation, conceptual site models (CSMs), selection of COPCs for human health, and data gaps analysis. The Site Characterization Work Plan will include a problem formulation based on the current understanding of the Site, a summary of available data, the selection of chemicals of potential concern (COPCs), and an analysis of data gaps for the human health risk assessment (HHRA). Data will be compiled from current literature or from data sets supplied by TCAI, EPA, or other agencies. Currently available data will be evaluated, and identified data gaps will be filled through collection of additional data as appropriate. A Phase I sampling and analysis plan to begin filling data gaps will be developed immediately after EPA's acceptance of the Site Characterization Work Plan.

Comment: Site characterization not only includes the identification of contaminants of concern for human health. It will include the identification of contaminants for ecological receptors and functions as well as those for human health. Data gaps for the ecological risk assessment will need to be identified, not just for the human health risk assessment. The RVFS will also need to focus on understanding fate and transport of contamination through the system, how that contamination affects both human health and the environment, identification of cleanup alternatives and evaluation of alternatives including data collection for developing cleanup alternatives, etc. Fate and Transport should be a site characterization task and modeling of site characteristics is a task that will be considered.

Deliverables such as work plans, reports, etc. will be submitted to EPA as set forth in the AOC. Input from the State, tribes, and other parties will be considered. Under the AOC, EPA has oversight and final approval on all work performed by Teck Cominco.

Success of the site characterization process will depend on agreement on an acceptable approach and consensus on the primary elements of the characterization. The Work Plan and the resulting characterization of the Site will be based on the following information developed in consultation with EPA, the State, the COG and the Tribes.

Comment: As previously stated, if Teck Cominco performs the site characterization, all work and submittals will be done under EPA's oversight and with final approval by EPA. The State and the Tribes will participate in the

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technical discussions and development of the RI/FS and associated work plans. EPA is willing to further discuss with the COG the role of the COG in technical discussions. There are other parties involved with the site that EPA and Teck Cominco will need to coordinate with beyond Washington, the tribes, and the COG including, but not limited to: other government stakeholders (Health, Parks Service, Bureau of Reclamation, BPA, natural resource trustees); environmental groups; and other community groups.

Agreement on the Problem Formulation

The problem formulation will include a description of the extent of the Study Area. It will focus initially on the current understanding of the Lake Roosevelt/Upper Columbia River area, including the physical characteristics of the proposed study area and the potential human use scenarios for the area. However, it may be amended to the extent dictated by new information collected during the risk assessment. The problem formulation will incorporate the understanding of the physical and environmental setting, such as the geology/hydrology of the Site, and of the effects of drawdown practices of Grand Coulee Dam on exposure pathways. Other information will include the biological characteristics of the Study Area and human uses of the area. The human health and ecological CSMS, which include those potentially complete exposure pathways to humans, wildlife, and aquatic receptors in the Study Area developed in conjunction with the EPA, will continue to be refined as additional data become available.

Comment: As previously stated, if Teck Cominco performs the site characterization, all work and submittals will be done under EPA's oversight and with final approval by EPA. Some of what is addressed in this paragraph is covered in the SOW under Site Characterization. The problem formulation will be developed through the RI/FS process that is outlined in the SOW, attached to the AOC. Information on the ecological characteristics rather than biological characteristics should be included, so that ecological interactions and trophic dynamics are considered.

The human receptors evaluated will include current and future potentially exposed populations (adults and children) such as residential receptors (general population), recreational receptors (boaters, beach users, fishers), and subsistence consumer receptors associated with the Study Area.

Comment: Exposure pathways and receptors will be identified and evaluated through the RI/FS process that is outlined in the SOW. EPA and Teck Cominco would coordinate with the State, tribes, and other parties in evaluating and identifying exposure pathways and receptors.

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The ecological receptors evaluated will include aquatic and riparian wildlife known to be associated with the Study Area. Special attention will be given to threatened and endangered species that may be identified in the area.

Comment: As already stated, exposure pathways and receptors will be identified and evaluated through the RI/FS process that is outlined in the SOW. EPA and Teck Cominco would coordinate with the State, tribes, and other parties in evaluating and identifying exposure pathways and receptors.

Agreement on Data Quality Review Methods and Usable Data Set

Data quality criteria from EPA guidance will be agreed upon with EPA, the State, the COG and the Tribes. These agreed criteria will be used to determine the usability of available Site data for site characterization and risk assessments. The results of the usability review will be submitted to EPA, the State, the COG and the Tribes for their review and approval.

Comment: See Section XI of the AOC for Quality Assurance and Section XIV for Sampling, Access, and Data Availability/Admissibility. Also see the RI/FS SOW for Sampling and Analysis Plan.

As previously stated, the State and the Tribes will participate in the technical discussions and development of the RI/FS. EPA is willing to further discuss, with the COG, the role of the COG in technical discussions. There are other parties involved with the site that EPA and Teck Cominco will need to coordinate with beyond Washington, the tribes, and the COG including, but not limited to: other government stakeholders (Health, Parks Service, Bureau of Reclamation, BPA, natural resource trustees); environmental groups; and other community groups. Under the AOC, if Teck Cominco performs the work, EPA has oversight and final approval over all work and submittals.

Preliminary Data Assessment

A preliminary data assessment will be presented in the Site Characterization Work Plan, and will include a description of the process used to select COPCs for human health, the selected COPCs, and a data gaps analysis.

Comment: A discussion of the identification and documentation of additional data and analysis needs is in the SOW for the RI/FS, under RI/FS Work Plan. Chemicals of concern will be identified for human health and ecological receptors and functions, not only for human health.

Risk-Based Approach to Site Characterization

A risk-based approach to site characterization will be proposed to address the data gaps identified in the preliminary data assessment. The site characterization will be an iterative process accomplished in phases. The Work Plan prepared in summer 2004 will include a

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proposal for a Phase I site characterization and a proposed approach for defining future phases. Data quality objectives (DQOs) for Phase I will be presented as well as a proposed approach for future revision of DQOs as needed.

Comment: Site characterization is discussed in the SOW for the RI/FS, Task 3. The schedule for site characterization, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW. Under the AOC, if Teck Cominco performs the site characterization, EPA will have oversight and final approval over all work and deliverables.

Agreement on Phase I of Data Collection and Analysis

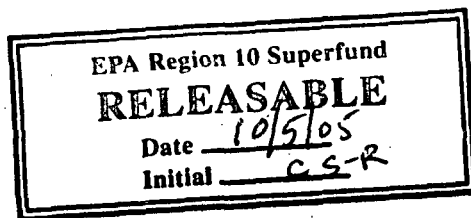
A Phase I sampling and analysis plan to address identified data gaps will be developed after EPA accepts the Site Characterization Work Plan.

Comment: A discussion on developing and implementing sampling and analysis plans to address additional data needs is in the SOW for the RI/FS under Task 3. The schedule for sampling and analysis, along with other work requirements, will be developed in the workplan submitted to EPA, as defined in Section VIII of the AOC and the SOW. Under the AOC, if Teck Cominco performs the site characterization, EPA will have oversight and final approval over all work and deliverables.

References (For General Information Purposes, and Not Intended to be Inclusive of All Sources That May be Used in the Site Characterization)

EPA. 1988. Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, Interim Final. (OWSER Directive 9355.3-01). EPA/540/G-89/004. U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, Washington, D.C.

EPA. 2000. Guidance for the Data Quality Objectives Process, EPA QA/G-4. EPA/600/R-96/055. U.S. Environmental Protection Agency, Office of Environmental Information, Washington D.C. 100 pp.



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General Comment: EPA has agreed to comment on the proposed exhibits so that Teck Cominco can better understand what EPA would require of Teck Cominco in an RI/FS AOC. The AOC that was sent to Teck Cominco on October 10, 2003 includes the Statement of Work, which outlines all work associated with an RI/FS. The RI/FS includes more than just minimal site characterization and risk assessments, as is described in Teck Cominco's exhibits.

Exhibit B

Lake Roosevelt/Upper Columbia River

Executive Summary of Proposed Human Health Risk Assessment Approach

Teck Cominco America, Inc. (TCAI), in consultation with EPA Region 10, the State of Washington (State), the Council of Governments (COG) and the Tribes, will conduct a risk assessment that addresses the potential human health risk associated with metals contamination at the Lake Roosevelt/Upper Columbia Study Area ("Site" or "Study Area"), as defined by EPA and TCAI. The human health risk assessment (HHRA) will evaluate the potential health risks to human receptors at the Site that are associated with estimated exposures to metals in Site media originating from mining and mineral processing activities. The HHRA will be developed consistent with U.S. EPA guidance and the best available science. Prior to conduct of the HHRA, details of the proposed approach and methods to be used will be described in an HHRA Work Plan developed in summer 2004 by TCAI in consultation with EPA, the State, the COG and the Tribes.

Comment 1:

EPA will determine who conducts the risk assessment for the Upper Columbia River in light of criteria described by EPA's Office of Solid Waste and Emergency Response (OSWER). EPA may decide to prepare the risk assessments itself based on any of the following considerations described in the OSWER guidance:

- 1. EPA's prior experience with the requesting PRPs**
- 2. PRP contractor's experience and qualifications**
- 3. PRP willingness to follow Agency processes and guidance**
- 4. Proper data submission**
- 5. Ability and schedule for EPA to complete RI/FS**
- 6. Level of Public Concern**

Other criteria to be considered by EPA in addition to those described by OSWER:

- 7. Complexity of the site setting**
- 8. Magnitude of anticipated uncertainties in the RI/FS**
- 9. Anticipated reliance of Superfund default exposure factors versus the need to develop new and unique exposure factors**

- 10. Tribal interest and concern**
- 11. Potential conflicts of interest which may compromise the RI/FS**
- 12. The critical nature of the Problem Formulation step in the Ecological and Human Risk Assessments**

The risk assessment will be conducted according to the NCP, EPA policy and guidance and with EPA approval. Any work or deliverables developed according to the Statement of Work will involve all stakeholders, including but not limited to the Colville Tribes, the Spokane Tribe, and the State of Washington. Other parties may include but not be limited to the Department of Fish and Wildlife, National Parks Service, other federal entities, the COG and interested community groups. In addition to this, EPA has not limited the scope of the investigation to metals.

The HHRA work plan will be developed in conjunction with the site characterization work plan described in Exhibit A. The HHRA will be conducted using an iterative (tiered) approach, beginning with production of a work plan that will include the results of discussions and agreements between TCAI and EPA, in consultation with the State, the COG and the Tribes, about methods for data usability and selection, exposure assessment, toxicity assessment, and risk characterization. Initial risk estimates will use currently available usable data and information for the Site to identify data gaps for the HHRA. Identified gaps will be addressed according to the site characterization work plan. The final HHRA will incorporate scientifically defensible, relevant data and information available at the time of submission of the final HHRA to EPA.

Comment 2: Any work or deliverables developed according to the Statement of Work would be developed by Teck Cominco and will involve the relevant stakeholders, including but not limited to the Colville Tribes, the Spokane Tribe, and the State of Washington. Other parties may include but not be limited to the Department of Fish and Wildlife, National Parks Service, other federal entities, the COG and interested community groups. Under the AOC, EPA has oversight and final approval over all workplans and submittals.

Moreover, this paragraph does not adequately convey the process or scope necessary for: defining data quality objectives, developing sampling and analysis plans, developing the site conceptual site model, identifying data gaps, identifying all applicable or relevant and appropriate regulations, performing the risk assessment, evaluating the risks, identifying appropriate alternatives to manage risk, screening alternatives, performing treatability studies, gathering data for use in evaluating alternatives and selecting appropriate cleanup remedies. All of these RI/FS components are better addressed in EPA's AOC and SOW.

The practical value of the HHRA will depend on adoption of an approach mutually acceptable to TCAI, EPA, the State, the COG and the Tribes. The work plan and the baseline HHRA will be developed in consultation with EPA, the State, the COG and the Tribes to ensure that each of the primary risk assessment elements described below are addressed.

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Comment 3: Any work or deliverables developed according to the Statement of Work will involve all stakeholders, including but not limited to the Colville Tribes, the Spokane Tribe, and the State of Washington. EPA is willing to discuss the role of the COG in these discussions with the COG. All parties that are involved in document review will provide comments and these comments will be incorporated according to Section VIII of the AOC. If there are any disputes that arise during the document development, Section XVIII of the AOC would apply. Under the AOC, EPA has oversight and final approval over all workplans and submittals.

Agreement on Selection of Chemicals of Potential Concern

The criteria for selecting chemicals of potential concern (COPCs) that will be the focus of the HHRA will be based on appropriate EPA risk assessment guidance and the scientific literature. The data quality review process and determination of usable data will be completed for the Site Characterization Work Plan, prior to development of the HHRA Work Plan. The resulting data set, and any additional data collected during the Site characterization, will be used for COPC selection for the HHRA.

Comment 4: Chemicals of Potential Concern will be developed through the Remedial Investigation/Feasibility Study process that is outlined in the Statement of Work, attached to the RI/FS AOC. The section above does not include enough detail on what "data quality review process" would be used or how a "determination of usable data" would be completed nor does this section include all the steps involved in determining the chemicals of potential concern. Under the AOC, EPA has oversight and final approval over all workplans and submittals.

Agreement on the Conceptual Site Model and Exposure Assessment

The HHRA Conceptual Site Model will show site-specific human receptors and potential human exposure pathways and will indicate which pathways are significant and potentially complete. The Baseline HHRA Work Plan will present mutually agreed upon exposure assessment methods and receptor-specific exposure factors for exposure pathways, which will then be quantitatively evaluated. The Conceptual Site Model will also support the preliminary data assessment in identifying any new data needed to resolve uncertainties, including where appropriate, biometric surveys.

Comment 5: Development of the conceptual site model is included in Site Characterization found in Section VIII of the AOC and in more detail in Task 3 of the Statement of Work attached to the AOC. It is difficult to understand, based on the limited work you proposed with site characterization, what would be used here for conceptual site modeling and exposure assessment.

Agreement on Toxicity Assessment

The human health toxicity assessment will weigh available evidence to assess the potential for COPCs to cause adverse health effects and to provide, where possible, a quantitative estimate of

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the relationship between the extent of exposure to a chemical and the potential for adverse effects. Toxicity values that describe the relationship between chemical exposure and the associated potential for adverse effects will be compiled from available sources, including the Integrated Risk Information System (EPA 2003), peer-reviewed literature and other sources from an agreed hierarchy. Issues specifically related to understanding the toxicity of metals, such as bioavailability, homeostasis, and essentiality, will be considered in evaluating toxicity and carcinogenicity data in the HHRA.

Comment 6: Please see Comment 1, above. At this point, EPA has not determined who will be performing the risk assessment, and is willing to discuss this issue with Teck Cominco further in the RI/FS AOC negotiations. However, the risk assessment will be conducted according to the NCP, EPA policy and guidance and with EPA approval. Identification of toxicity values, exposure values, and all inputs to the risk calculations will be made by EPA.

Agreement on the Approach to Risk Characterization

The risk characterization will follow standard U.S. EPA risk assessment guidance. Risk estimates will be evaluated for both cancer and non-cancer endpoints, as appropriate, and compared to acceptable risk levels. The risk estimates will be used to answer the questions "Does exposure to COPCs found at the Site pose unacceptable risk to human receptors? Which COPCs and which pathways pose unacceptable risk to identified human receptors?" The answers to these risk assessment questions will be key to understanding what actions (if any) may be appropriate to reduce and/or eliminate unacceptable risks. A comprehensive presentation of the potential sources of uncertainty will also be included in the risk characterization and will include an evaluation of the potential impact of each uncertainty category on the final risk estimates.

Comment 7: Please see Comment 1, above. If Teck Cominco performs the risk assessments, all work and submittals under the assessments will be subject to EPA oversight and approval.

Agreement on the Results of the HHRA

On completion of the HHRA and submission to the EPA, the State, the COG and the Tribes, the HHRA will be a primary tool used in the development of appropriate risk reduction strategies for the Site. Specific areas (hot spots) that are shown to be associated with significantly elevated risks will likely be considered as candidate areas for early action.

Comment 8: Any work or agreements on work developed according to the Statement of Work will involve all stakeholders, including but not limited to the Colville Tribes, the Spokane Tribe, and the State of Washington. Other parties may include, but are not limited to, the Department of Fish and Wildlife, National Parks Service, other federal entities, the COG and interested community groups. Under the AOC, EPA has oversight and final approval over all work and submittals. Upon completion of the risk assessment, the parties would discuss risk management to address any unacceptable risks identified during the risk

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assessment process. This would include identification of cleanup alternatives appropriate to mitigate all risks, according to the management strategy identified by all parties. Final selection of cleanup alternatives is made by EPA. Further, cleanup or management alternatives must be developed for every location that exhibits an unacceptable risk, not just hot spot areas.

References (For General Information Purposes, and Not Intended to be Inclusive of All Sources That May be Used in the HHRA)

EPA. 1986. Guidelines for Carcinogen Risk Assessment. Federal Register 51(185):33992-43003. 24 September 1986.

EPA. 1989. Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part A), Interim Final. Office of Solid Waste and Emergency Response, EPA/540/1-89/002. December 1989.

EPA. 1991. Risk Assessment Guidance for Superfund, Volume I. Human Health Evaluation Manual, Supplemental Guidance, Standard Default Exposure Factors, Interim Final. Office of Emergency and Remedial Response: OSWER Directive: 9285.6-03.

EPA. 2000. EPA Region 10 Supplemental Human Health Risk Assessment Guidance, Office of Environmental Assessment, Soil Ingestion Rates. 25 January 2000.

EPA. 2001a. Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments), Final. Office of Emergency and Remedial Response, Publication 9285.7-47. December 2001.

EPA. 2001b. Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part E, Supplemental Guidance for Dermal Risk Assessment), Interim, Review Draft for Public Comment. Office of Emergency and Remedial Response. EPA/540/R/99/005. September 2001.

EPA. 2003. Integrated Risk Information System (IRIS) database. Washington, D.C.

EPA. 2003a. Draft final guidelines for carcinogen risk assessment. (External review draft, February 2003). EPA/630/P-03/001A, NCEA-F-0644A. Risk Assessment Forum, U.S. EPA, Washington, D.C. pp. 120.

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General Comment: EPA has agreed to comment on the proposed exhibits so that Teck Cominco can better understand what EPA would require of Teck Cominco in an RI/FS AOC. Attachments to the legal agreement (AOC) will include the Statement of Work, which outlines all work associated with a Remedial Investigation/Feasibility Study. This work would therefore include more than just minimal site characterization and risk assessments, as is included in these exhibits.

Exhibit C

Lake Roosevelt/Upper Columbia River

Executive Summary of Proposed Ecological Risk Assessment Approach

Teck Cominco America, Inc. (TCAI), in consultation with EPA Region 10, the State, the COG and the Tribes, will conduct a risk assessment that addresses the potential risk to ecological receptors associated with metals contamination at the Lake Roosevelt/Upper Columbia River Study Area ("Study Area" or "Site"). The ecological risk assessment (ERA) will consist of an aquatic ecological risk assessment and a separate plant and wildlife assessment. They will focus on the Study Area as agreed to by TCAI and EPA, in consultation with the State, the COG and the Tribes, and will evaluate the potential ecological risks associated with estimated exposures to metals in Site media. The ERA will be developed consistent with US EPA (1997, 1998) guidance. Details of the proposed approach and methods to be used will be described in an ERA Work Plan developed by TCAI in consultation with EPA, the State, the COG and the Tribes. While the focus of the ERA work plan will be on metals-related issues, the ERA will also identify and take into account factors that primarily control the ecological health of Lake Roosevelt (the "whole lake" limiting factors).

Comment 1:

A discussion on EPA's baseline risk assessment is in the AOC, Section IX, and in the SOW for the RI/FS.

EPA will determine who conducts the risk assessment in light of criteria described by EPA's Office of Solid Waste and Emergency Response (OSWER). EPA may decide to prepare the risk assessments itself based on any of the following considerations described in the OSWER guidance:

- 1. EPA's prior experience with the requesting PRPs***
- 2. PRP contractor's experience and qualifications***
- 3. PRP willingness to follow Agency processes and guidance***
- 4. Proper data submission***
- 5. Ability and schedule for EPA to complete RI/FS***
- 6. Level of Public Concern***

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Other criteria to be considered by EPA in addition to those described by OSWER:

- 7. Complexity of the site setting***
- 8. Magnitude of anticipated uncertainties in the RI/FS***
- 9. Anticipated reliance of Superfund default exposure factors versus the need to develop new and unique exposure factors***
- 10. Tribal interest and concern***
- 11. Potential conflicts of interest which may compromise the RI/FS***
- 12. The critical nature of the Problem Formulation step in the Ecological and Human Risk Assessments***

The risk assessment will be conducted according to the NCP, EPA policy and guidance and with EPA approval. Any work or deliverables developed according to the Statement of Work, is subject to EPA oversight and approval, and will involve all stakeholders, including but not limited to the Colville Tribes, the Spokane Tribe, and the State of Washington. Other parties may include but are not limited to the Department of Fish and Wildlife, National Parks Service, other federal entities, the COG and interested community groups.

In addition to this, the scope of the investigation has not been limited to metals.

The ERA approach will initially be based on currently available usable data and information for the Site. The ERA will be conducted using an iterative approach, beginning with production of a work plan that includes the results of discussions and agreements between TCAI and EPA, in consultation with the State, the COG and the Tribes, about the selection of representative receptors, selection of chemicals of potential concern, exposure assessment, toxicity assessment, and risk characterization methods. The final ERA will incorporate scientifically defensible, relevant data and information available at the time of submission to EPA.

Comment 2: EPA's baseline risk assessment is discussed in the SOW for the RI/FS under RI/FS Work Plan. Data quality is discussed in the SOW for the RI/FS under Sampling and Analysis Plan. Under the AOC, all work or deliverables is subject to EPA oversight and final approval.

The Work Plan and the resulting ERA for the Site will be based on the following information developed in consultation with EPA, the State, the COG and the Tribes. Success of the ERA will depend on a mutually acceptable approach and agreement on each primary element of the ERA.

Comment 3: Under the AOC, EPA has oversight and final approval over all work and submittals. Teck Cominco would develop the workplans in coordination with the

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relevant stakeholders, including but not limited to the Tribes and the State. EPA will discuss the role of the COG in the technical discussions with the COG.

Agreement on the Conceptual Site Model and Exposure Assessment

The agreed ERA Conceptual Site Models will identify selected representative aquatic and wildlife receptors and potential exposure pathways and will indicate which pathways are potentially complete and significant. Receptors evaluated in the ERA will consist of indicator species that are representative of different types of organisms and trophic levels associated with the Site. Special attention will be given to threatened and endangered species that may be identified in the area. The ERA Work Plan will include the problem formulation and identify proposed methods for evaluating and quantifying exposure, effects and risk.

Comment 4: Development of the conceptual site model is included in Site Characterization found in Section VIII of the AOC and in more detail in the attached Statement of Work, Task 3. It is difficult to understand, based on the limited work you have proposed with site characterization, what would be used here for conceptual site modeling and exposure assessment.

Agreement on Selection of Chemicals of Potential Concern

The criteria for selecting chemicals of potential concern (COPCs) that will be the focus of the ERA will be identified using the preliminary data assessments, which will be conducted in consultation with EPA, the State, the COG and the Tribes. Because a phased approach will be used to evaluate existing data, and to direct the collection of new data, more than one data assessment (screening) may be carried out. The process for data quality review and determination of what data are usable will be completed for the Site Characterization Work Plan, prior to development of the ERA Work Plan. The resulting data set, and any additional data collected during the site characterization, will be used for COPC selection for the ERA.

Comment 5: Chemicals of Potential Concern will be developed through the Remedial Investigation and Feasibility Study process that is outlined in the Statement of Work, attached to the RI/FS AOC. The section above does not include enough detail on what "data quality review process" would be used or how a "determination of usable data" would be completed nor does this section include all the steps involved in determining the chemicals of potential concern. Under the AOC, if Teck Cominco is conducting the work, EPA has oversight and final approval over all work and submittals.

Agreement on Toxicity Assessment

The ecological toxicity assessment will weigh available evidence regarding the potential for particular COPCs to cause adverse effects to each representative aquatic and wildlife

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receptor species and will provide, where possible, a quantitative estimate of the relationship between the extent of exposure to a chemical and the likelihood of adverse effects. Toxicity reference values (TRVs) that describe a no-effects or lowest-effects dose or body burden for the representative receptors will be compiled from sources such as the EPA ECOTOX database (EPA 2002), the wildlife exposure factors handbook (EPA 1993 a, b), water quality criteria documents, the Environmental Residue Effects Database (ACOE/EPA 2002), other databases, and the peer-reviewed literature. The toxicity assessment will include consideration of background concentrations, metabolically essential concentrations, homeostatic regulation of tissue residues, and bioavailability of metals.

Comment 6: Please see Comment 1, above. At this point, EPA has not determined who will be performing the risk assessment, and is willing to discuss this issue with Teck Cominco further in the RI/FS AOC negotiations. However, the risk assessment will be conducted according to the NCP, EPA policy and guidance and with EPA approval. Identification of toxicity values, exposure values, and all inputs to the risk calculations will be made by EPA.

Agreement on the Approach to Risk Characterization

Risks will be characterized initially through screening assessments using quotients and probabilistic assessments. The methodologies used will conform to the best available scientific practices and guidances. Direct contact, aqueous uptake and food chain exposure pathways will be evaluated in accordance with the methodologies identified in the aquatic and plant/wildlife Work Plans. Estimated exposures to COPCs will be compared to acute and chronic TRVs and species sensitivity distributions for each COPC to estimate risks to each representative receptor. Risk estimates for each receptor species will be compared to determine the species most likely to be adversely affected by each COPC (most sensitive species). Where field data are available for relevant receptors, those data may also be used to determine if a risk identified through comparison to TRVs is consistent with the actual condition of the receptor species located in the Study Area. The risk estimates and field data will be used to assess whether the Site poses unacceptable risk to ecological receptors, and which COPCs and pathways pose unacceptable risk to the identified Site receptors? A comprehensive presentation of the potential sources of uncertainty will be included in the risk characterization and will evaluate the potential impact of each area of uncertainty on the final risk estimates, presented as a sensitivity analysis.

Comment 7: Please see Comment 1, above.

Agreement on the Results of the ERA

On completion of the ERA and submission to EPA, the State, the COG and the Tribes, the ERA will be one of the primary tools used to develop risk mitigation options for the Site. Specific areas (hot spots) that are shown to be associated with significant potential risks to

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aquatic or wildlife receptors at the Site will be considered as candidate areas for early actions, including closure of the potential route(s) of exposure, removal or mitigation.

Comment 8: Under the AOC, for work Teck Cominco performs, EPA will provide oversight and final approval. Any work or agreements on work developed according to the Statement of Work will involve all relevant stakeholders, including but not limited to the Colville Tribes, the Spokane Tribe, and the State of Washington. Other parties may include but are not limited to the Department of Fish and Wildlife, National Parks Service, other federal entities, the COG and interested community groups.

Upon completion of the risk assessment, the parties would discuss risk management to address any unacceptable risks identified during the risk assessment process. This would include identification of cleanup alternatives appropriate to mitigate all risks, according to the management strategy identified by all parties. Final selection of cleanup alternatives is made by EPA. Further, cleanup or management alternatives must be developed for every location that exhibits an unacceptable risk, not just hot spot areas.

References (For General Information Purposes, and Not Intended to be Inclusive of All Sources That May be Used in the HHRA)

ACOE/EPA. 2002. Environmental Residue Effects Database. Available:

<http://www.wes.army.mil/el/ered/index.html#misc>

EPA. 1993a. Wildlife Factors Handbook, Chapter 2.1 Birds, Office of Research and Development, EPA/600/R-93/187

EPA. 1993a. Wildlife Factors Handbook, Chapter 2.2 Mammals, Office of Research and Development, EPA/600/R-93/187

EPA. 1997. Ecological risk assessment guidance for Superfund: Process for designing and conducting ecological risk assessments, Interim final. EPA/540-R-97-005. Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, D.C.

EPA. 1998. Final guidelines for ecological risk assessment. EPA/630/R-95/002F. Risk Assessment Forum, U.S. Environmental Protection Agency, Washington, D.C.

EPA. 2002. ECOTOX User Guide: ECOTOXicology Database System. Version 3.0. Available: <http://www.epa.gov/ecotox/>